

Instruction Sheet

B2555 Electric Sidewinder® Bender

RPS-0151 Rev. A 06/04

IMPORTANT RECEIVING INSTRUCTIONS

Visually inspect all components for shipping damage. If shipping damage is found, notify carrier at once. Shipping damage is NOT covered by warranty. The carrier is responsible for all repair and replacement costs resulting from damage in shipment.

SAFETY ISSUES

IMPORTANT – USER SAFETY AND PROTECTION: In setting up systems to fit your operations, care must be taken to select the proper components and design to insure appropriate that all safety measures have been taken to avoid the risk of personal injury and property damage from your application or system.

GARDNER BENDER IS NOT RESPONSIBLE FOR DAMAGE OR INJURY CAUSED BY UNSAFE USE, MAINTENANCE OR THE APPLICATION OF ITS PRODUCTS. Please contact Gardner Bender for guidance when you are in doubt as to the proper safety precautions to be taken in designing and setting up your particular application.



B2555 Electric Sidewinder® Bender

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1.0 SAFETY SYMBOL DEFINITIONS

The symbol below is used to call your attention to instructions concerning your personal safety. Watch for these symbols. They point out important safety precautions. They mean "ATTENTION! Become alert. Your personal safety is involved." Read the message that follows and be alert to the possibility of personal injury or death.

A WARNING

Is serious but less inevitable. There is some probability that death, severe bodily injury or major property damage could result.

Is less serious but still demands attention. Indicates a hazard which may result in minor injury or property damage.

2.0 WARNINGS

This section contains information for your protection, safety and quick reference. When using an electrical appliance basic precautions should always be followed, including the following.



Read all Instructions before using the B2555 Sidewinder® Bender.

Never operate this Bender in an explosive atmosphere.

Never operate the Bender in wet or damp locations. DO NOT expose the Bender to rain.

Never use an extension cord longer than 100 feet.

Never alter this equipment, doing so will void this warranty.

Never wear loose clothing while operating the Bender.

Never stand on tool. Serious injury could occur if the tool is tipped or if the bending shoe is unintentionally contacted.

Never leave tool running unattended. Turn power off. Do not leave tool until it comes to a complete stop.

Never force tool. If bending shoe will not turn, STOP unit and unplug before checking for any obstructions.

Always use 120 V AC, 20 AMP ground fault protected receptacle for power supply.



Always inspect power cord before using Bender. Replace damaged or worn cords.



Always wear approved safety glasses when the bender is in operation.

Always disconnect the Bender before servicing or changing shoes, attachments or supports, and when not in use.

Always inspect the Bender before operating. Replace any damaged, missing or worn parts.

Always use 12-gauge 20 AMP extension cords that have three prong grounding type plugs and three-hole receptacles that accept the Bender's plug.



Always keep hands and feet away from pinch points such as bending shoes, rollers and conduit when Bender is in use.

Always keep conduit under control when bending.

Always keep the path of the bending conduit clear of obstructions. Make sure all obstacles are clear of the bending path BEFORE you bend the conduit.

Always use the appropriate shoe groove and roller support for the type and size of conduit to be bent.

Always use the Bender in a dry, well lit area. Always maintain Bender with care. Keep Bender clean for best and safest performance.

Always make sure switch is in the off position before plugging in. This will reduce the risk of unintentional starting.

Always use recommended accessories. Consult this manual for recommended accessories. The use of improper accessories may cause risk of injury.

Always check for damaged or worn parts. Before further use of the tool a guard or other part that is damaged should be carefully checked to determined that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A part that is damaged should be properly repaired or replaced.

Always make bender childproof with lockouts, master switches or by unplugging unit.

ACAUTION

Always use right tool. Don't force tool or attachment to do a job for which it was not designed.

Always wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.

3.0 BENDER FEATURES

1. Bending Degree Scale - easy to read for exact bends

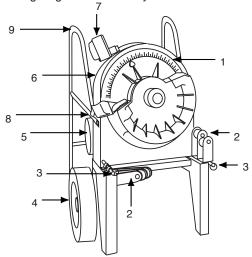


Figure 1. B2555 Electric Sidewinder® Bender

- 2. Support Rollers for supporting the pipe during bending. (Rigid set pictured.)
- 3. Hinge Pin for securing the support rollers.
- 4. 12 Inch Wheels for easy mobility.
- D.C. Motor quiet and strong.
- Bending Instructions Decal easy to read for quick reference.
- 7. Remote Pendant with 6 foot cord. (Bend and unload from pendant.)
- Handrail Bolt Remove this bolt from both sides and handles will hinge out of way to complete a off-set bend.
- Large Handles Protects the back of bender and enables the bender to be used horizontally. (Can also be moved for off-set bends.)

4.0 SPECIFICATIONS

B2555 Sidewinder® Bender							
Width	29½"						
Length	241/2"						
Height	42"						
Weight	270 lbs. Power Unit Only w/o shoes						

5.0 SPECIAL FEATURES

The B2555 Series Benders have a unique feature for the removal of the handles during an off-set Bend. See Figure 2. When creating back-to-back bends, the removal of the handle may be necessary.

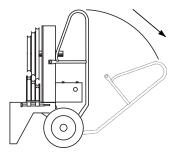


Figure 2. Handle Removal

The B2555 Series Bender may also be used in a horizontal position for special bends. The Bender can operate in this position as efficiently as it does in the upright position. See Figure 3.

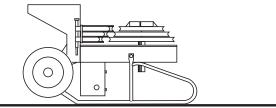


Figure 3. Horizontal Position

6.0 MODEL INFORMATION

When equipped with the appropriate shoe group, the B2555 POWER UNIT is designed for bending:

- ½" through 2" Rigid conduit
- 1/2" through 2" EMT conduit
- 1/2" through 2" IMC conduit
- ½" through 2" 40 mil PVC Coated Rigid conduit
- ½" through 2" schedule 40 steel pipe

No modification to the B2555 POWER UNIT is required to accommodate these shoes or rollers. No tools are required to install or remove these shoes and rollers. The B2555 BENDER is NOT recommended for bending any steel quality above schedule 40.

MODELS

B2555 Electric Bender Power Unit only, without shoes and roller supports.

B2555RIG Electric Bender Unit with shoes and roller supports for ½" through 2" rigid conduit and pipe and ½" thought 1¼" IMC conduit.

B2555EMT Electric Bender with shoes and roller supports for ½" through 2" EMT conduit.

B2555IMC Electric Bender with shoes and roller supports for $1\!\!/2\!\!'$ through 2" IMC conduit.

B2555PVC Electric Bender with shoes and roller supports for ½" through 2" PVC coated conduit.

7.0 SHOE GROUPS

7.1 RIGID

BRIG-52 - For bending $\frac{1}{2}$ " thru 2" Rigid Steel Conduit, $\frac{1}{2}$ " thru 1 $\frac{1}{4}$ " IMC Conduit and $\frac{1}{2}$ " - 2" Schedule 40 Pipe

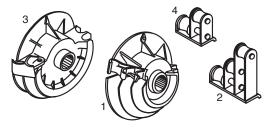


Figure 4. BRIG-52 - RIGID Shoe Group

RIGID							
Part #	ID#						
RS-5125	½" thru 1¼" Bending Shoe	1					
RSR-5125	½" thru 1¼" Roller Support	2					
RS-152	1½" and 2" Bending Shoe	3					
RSR-152	1½" and 2" Roller Support	4					

7.2 IMC

BIMC-52 - For bending 11/2" thru 2" IMC

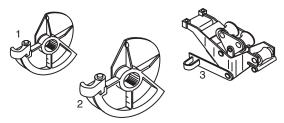


Figure 5. BIMC-52 - IMC Shoe Group

IMC								
Part #	Description	ID#						
IS-15	1½" Bending shoe	1						
IS-2	2" Bending Shoe	2						
ISR-152	1½" - 2" IMC Roller Support Unit	3						
BX-1	Metal Storage Box (not shown)							

7.3 EMT

BEMT-52 - For bending ½" thru 2" (Thinwall)

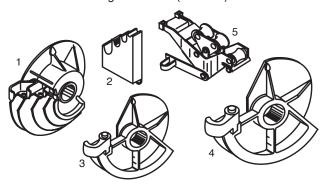


Figure 6. BEMT-152 - EMT Shoe Group

	EMT								
Part #	Description	ID#							
ES-5125	½" thru 1¼" Bending shoe	1							
ESR-5125	1/2" thru 11/4" EMT Support	2							
ES-15	1½" Bending Shoe	3							
ES-2	2" Bending Shoe	4							
ESR-152	1½"-2" EMT Roller Support	5							
BX-1	Metal Storage Box (not shown)								

7.4 PVC

BPVC-52 - For bending ½" thru 2" 40 Mil PVC Coated Rigid

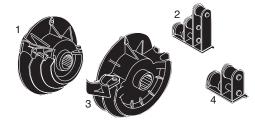


Figure 7. BPVC-52 - PVC Shoe Group

PVC								
Part #	Part # Description							
PVS-5125	$\frac{1}{2}$ " thru $\frac{1}{4}$ " Bending shoe	1						
PVR-5125	½" thru 1¼" Roller Support	2						
PVS-152	11/2" and 2" Bending Shoe	3						
PVR-152	11/2" and 2" Roller Support	4						
BX-1	Metal Storage Box (not shown)							

8.0 Bending Radius Chart

	Conduit Centerline Bending Radius										
Size ½" 3/4" 1" 1½" 1½"											
EMT	41/4"	53/8"	6¾"	83/4"	89/32"	93/16"					
IMC	-	-	-	-	8%32"	93/16"					
RIGID	43/8"	41/2"	53/4"	71/4"	81/4"	91/2"					

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor con result in a risk of electric shock. The

conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel it the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Figure 8. The tool has a grounding plug that looks like the plug illustrated in Figure 9.



Figure 8. 3-Prong Outlet (20 A)

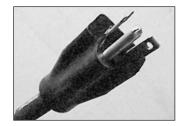


Figure 9. 3-Prong Plug (Nema 5-20)

9.0 General Bending Instructions

Mounting Bending Shoes

Choose desired shoe size and type (Rigid, IMC, EMT, or 40 Mil PVC Coated Rigid) and slide shoe onto the main drive sprocket shaft. See Figure 10. Next, align the four drive studs on the back of the shoe with the four holes in the main drive sprocket. Push the shoe onto the main drive sprocket shaft. See Figure 11.

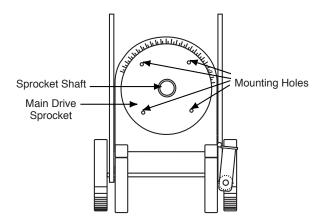


Figure 10. Mounting Bending Front View

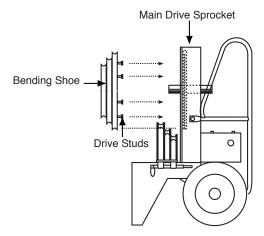


Figure 11. Mounting Bending Side View

9.1 MOUNTING SUPPORT ROLLERS AND SUPPORT UNITS

Choose the desired support roller or support unit for corresponding shoe size and type (Rigid, IMC, EMT, or 40 mil PVC coated Rigid.) The appropriate size and type of support MUST be used with the corresponding shoe size and type.

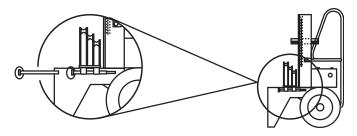


Figure 12. Mounting Support

Mount the support roller or support unit on the right leg of the bender as you face the unit. Secure the support roller or support unit with the quick release hinge pin. See Figure 12.

GREENLEE® - Bending shoes and attachment from GREENLEE® 555 R, E, I (Rigid, EMT, IMC) and 40 mil PVC coated Rigid Benders with serial number PL and AAJ will fit the B2555 Sidewinder® Bender. All B2555 Sidewinder® Bending shoes and attachments will fit GREENLEE 555 R, E, I Benders with PL and AAJ serial numbers.

ENSLEY - No modifications are needed to mount the B2555 Sidewinder® Rigid shoes to the ENSLEY E-969.

Current Tools® - Bending shoe and attachments from Current

Tools® 77 Bender (Rigid, EMT, IMC, and PVC coated) will fit the B2555 Sidewinder®.

GREENLEE® and 555® are registered trademarks of GREENLEE/Textron.

ENSLEY and E-969 are trademarks of the Rothenberger Group.

10.0 BENDING INSTRUCTIONS, FOR $^{1}\!\!/_{2}$ ", $^{3}\!\!/_{4}$ ", 1", $1^{1}\!\!/_{4}$ " EMT, IMC, AND RIGID

Never operate this Bender in an explosive atmosphere. Injury or Death may occur.

- 1. Be sure to match the appropriate shoe with its corresponding support unit. Attach the support using the hinge pin. See Figure 12.
- 2. Mark pipe or conduit at desired length.

NOTE: A 2" minimum dimension is required to eliminate flattening the end of the pipe/conduit. See Figure 13.

NOTE: Stub-Up and offset dimensions can be found on the Bending Charts on Pages 8 to 9 of this manual or on the bending instructions decal on top of each Bender.

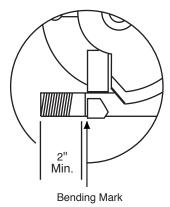


Figure 13. Bending Mark

- 3. Rotate the bending shoe 5 to 10 degrees below the 0 (zero) degree setting, as shown in Figure 14. Place Bending mark in line with front edge of shoe hook.
- 4. After marking the pipe/conduit, place it into the bender. See Figure 14. The pipe/conduit should slide over the correct size support unit, through the shoe groove and into the hook. The Bending mark should be at the front (OUTSIDE) edge of the hook. See Figure 14.

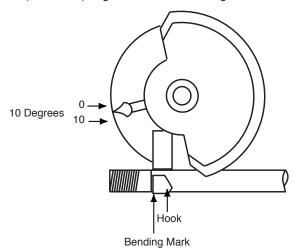


Figure 14. Bending 5 to 10 Degrees

5. Using the remote hand unit (pendant) place the "Bend/Unload" switch in the "bend" position. Press the "Jog" button and advance the Bender. Be sure to check the alignment of the bending mark as the rotating shoe locks the pipe/conduit into position. Advance the Bender shoe to the desired degree of bend. When the pointer on the shoe reaches the desired degree of bend, release the "Jog" button and the Bender will stop. See Figure 15.

NOTE: Due to springback in pipe/conduit, some over bending is necessary to achieve the desired degree of bend. See page 8 and 9, or the bending instruction decal on the top of each Bender for approximate springback compensation figures.

6. To release the pipe/conduit, place the "Bend/Unload" switch in the "Unload" position. Press the "Jog" button and reverse the shoe far enough to stop and drop the support unit. See Figure 15. The pipe/conduit can now be removed.

NOTE: The pipe/conduit should be under control when unloading.

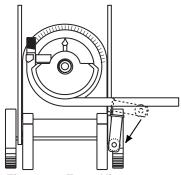


Figure 15. Front View

A WARNING

Failure to return to zero to remove conduit may result in injury or Death.

10.1 11/2" & 2" EMT & IMC CONDUIT:

1. See "General Bending Instructions" for mounting shoes and support units. Be sure to match the appropriate shoe with its corresponding support unit.

NOTE: The outside roller on the $1\frac{1}{2}$ " - 2" IMC support unit is metal See Figure 16. The outside roller on the $1\frac{1}{2}$ " - 2" EMT support unit is urethane. See Figure 17.

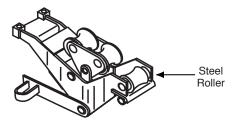


Figure 16. Steel Roller

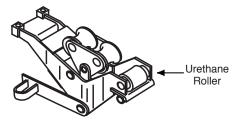


Figure 17. Urethane Roller

Mark the conduit to the desired length. Note that a 2" minimum dimension is required to eliminate flattening the end of the conduit. See Figure 18.

NOTE: "Stub-Up" and "Offset" dimensions can be found on the bending charts on pages 8 to 9 of this manual or on the bending instruction decal on the top of each Bender.

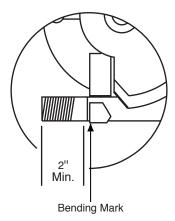


Figure 18. Bending Mark

- 3. Rotate the bending shoe 5 to 10 degrees below the 0 degree setting. See Figure 14.
- 4. After marking the conduit, place it into the Bender. See Figure 19. The conduit should slide over the support rollers and through the shoe groove and into the hook. The bending mark should be at the front (outside) edge of the hook. See Figure 19.

NOTE: The appropriate size and type of support roller MUST be used with the corresponding shoe size and type.

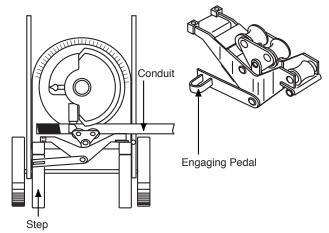


Figure 19. Engaging Pedal

- Step on the "Engaging Pedal" which will raise the proper rollers to come in contact with the conduit. See Figure 19.
- 6. Keep foot pressure on the engaging pedal and push the Bend/Unload switch to the "Bend" position. Then press the "Jog" button. The conduit will pull the support rollers assembly against the stop. Foot pressure can then be removed from the engaging pedal. Be sure to check the alignment of the bending mark as the rotating shoe locks the conduit into position.

Advance the Bender shoe to the desired degree of bend. When the pointer on the shoe reaches the desired degree of bend, release the "Jog" button and the Bender will stop. See Figure 20.

NOTE: Due to springback in pipe/conduit, some overbending is necessary to achieve the desired degree of bend. See

page 8 and 9, or the bending instruction decal on top of each Bender for approximate springback compensation figures.

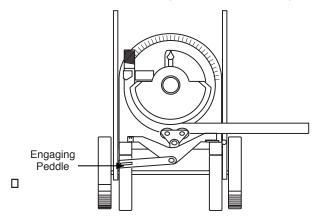


Figure 20. Front View - Desired Bend Degree

7. To release the conduit, place the Bend/Unload switch in the "Unload" position. Press the "Jog" button and reverse the shoe. The support rollers will then drop, allowing removal of the conduit.

Note that the pipe/conduit should be under control when unloading. Failure to do this may result in injury or death.

After removal of the conduit, inspect it for wrinkling or excessive side marks. If these conditions occur refer to the "Squeeze Adjustment Procedure".

11.0 SQUEEZE ADJUSTMENT FOR 1½" & 2" EMT AND IMC SUPPORT ROLLER UNITS

The B2555 Sidewinder® has a Squeeze Adjustment feature if wrinkling or side marking becomes a problem during the bending process. This feature allows you to increase or decrease the amount of pressure applied to the conduit during bending, thereby eliminating these problems.

1. If wrinkling occurs, pressure against the conduit during the bending process must increase. To increase the squeeze (pressure), loosen both sets of screws and turn both adjusting bolts one-half turn clockwise. Tighten both set screws and bend one piece of conduit to test the adjustment. If wrinkling still occurs, repeat the procedure.

NOTE: Both adjusting bolts must be in contact with the Bender frame. See Figure 22.

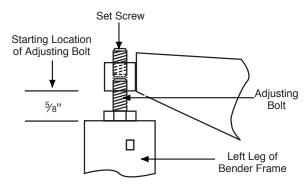


Figure 22. Adjusting Bolts

If side marking occurs, or loading IMC or EMT is a problem, pressure against the conduit during the bending process must be decreased. To decrease the squeeze (pressure), loosen both set screws and turn both adjusting bolts one-half turn counterclockwise. Tighten both set screws and bend one piece of conduit to test the adjustment. If side marking still occurs, repeat the procedure.

NOTE: Both adjusting bolts must be in contact with bender frame.

12.0 MAINTENANCE INSTRUCTIONS

12.1 GEAR BOX OIL

Always disconnect power supply before removing any guards or covers and before servicing this bender. Failure to do so may result in serious injury or death.

The Gear Box is filled with oil at the factory and should not require periodic flushing. If the Gear Box is opened for repair, flush with a light SAE #10 oil then run unit with no load for 3 minutes. Then, drain and refill the unit with 28 fluid ounces of gear oil from the following list:

Amoco - Amoco Worm Gear Oil Chevron - Cylinder Oil 460X Exxon - CYLESSTIC TK460 Mobil - 600 W Cylinder Oil Shell - Sun Gear Oil 7C

12.2 CHAIN TENSIONER # 60 CHAIN (FRONT)

To adjust front (# 60 Chain) Tension:

- 1. Remove front cover plate.
- 2. To increase tension on chain, loosen nut "A" and tighten nut "B"
- 3. To decrease tension on chain loosen nut "B" and tighten nut "A"

12.3 CHAIN TENSIONER # 40 CHAIN (REAR)

To adjust front (# 40 Chain) Tension:

- Loosen 8 bolts (4 on top and 4 on bottom) that hold the gear box in position.
- 2. To tighten, move the gear box to the left and re-tighten bolts.
- 3. To loosen, move the gear box to the right and re-tighten bolts.

NOTE: Be sure to keep the gear box and motor in line with the bender.

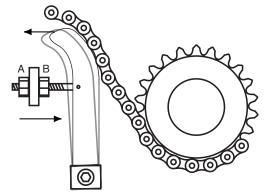


Figure 23. Front View - Tension Adjustment

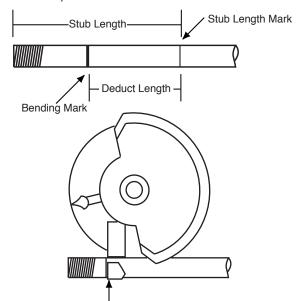
13.0 STUB-UP BENDING INFORMATION AND CHARTS

To locate bending marks and springback of 15, 30, 45, 60, and 90 degree bends for a desired stub:

- 1. Check chart A, B, or C for deduct length. Note that minimum stub length is deduct length plus 2".
- 2. Measure and mark desired stub length on conduit (stub length mark). Subtract "Deduct Length" from this mark and

make a second mark (bending mark). Place bending mark at front edge of shoe hook. Check chart A, B, C for spring back of desired degree of bend. Bender should be advanced to this degree to obtain desired degree of bend.

NOTE: Springback figures are approximate. Minimum stub length = deduct plus 2".



Place Bending Mark in line with front edge of shoe hook

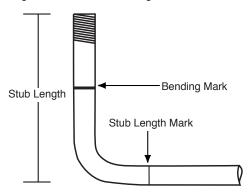


Figure 24. Stub-up Bending Markings

Chart A - Rigid Conduit/Schedule 40 Steel Pipe									
Conduit Size	Deduct Length	Springback 15° 30° 45° 60° 90°							
1/2"	81/2"	20"	36 ¹ / ₄ "	51 ¹ / ₄ "	67 ¹ /2"	971/2"			
3/4"	81/2"	16 ¹ / ₄ "	31 ¹ / ₄ "	461/4"	61 ¹ / ₄ "	921/2"			
1"	10"	171/2"	321/2"	471/2"	633/4"	933/4"			
11/4"	123/4"	171/2"	321/2"	471/2"	633/4"	95"			
1½"	14 ¹ / ₄ "	183/4"	333/4"	483/4"	65"	95"			
2"	16 ¹ /8"	20"	35"	483/4"	633/4"	961/4"			

Chart B - EMT Conduit									
Conduit Size	Deduct Length	Springback 15° 30° 45° 60° 90°							
1/2"	7"	16 ¹ / ₄ "	321/2"	47 ¹ /2"	633/4"	95"			
3/4"	87/8"	171/2"	333/4"	483/4"	633/4"	95"			
1"	103/4"	171/2"	321/2"	483/4"	65"	95"			
1 ¹ / ₄ "	13 ¹ /8"	171/2"	333/4"	483/4"	65"	95"			
11/2"	13 ⁷ /8"	16 ¹ / ₄ "	311/4"	46 ¹ / ₄ "	61 ¹ / ₄ "	921/2"			
2"	15 ³ /8"	171/2"	333/4"	483/4"	633/4"	95"			

Chart C - IMC Conduit									
Conduit	Deduct	15°	Springback						
Size	Length	15	30°	45°	60°	90°			
1/2"	81/2"	211/4"	371/2"	521/2"	683/4"	983/4"			
3/4"	81/2"	17½"	321/2"	471/2"	633/4"	933/4"			
1"	10"	17½"	321/2"	471/2"	633/4"	95"			
11/4"	123/4"	183/4"	333/4"	483/4"	65"	961/4"			
11/2"	133/4"	171/2"	333/4"	483/4"	633/4"	95"			
2"	15 ¹ / ₄ "	20"	35"	50"	65"	961/4"			

14.0 OFFSET BENDING INFORMATION AND CHARTS

- 1. Measure distance from end of conduit to start of bend and mark conduit ("Mark 1").
- 2. Refer to chart E for measurement "X" deduct this distance from "Mark 1" and place "Mark 2" on conduit.
- Refer to chart D for center to center distance between marks. Measure this distance from "Mark 2" and place "Mark 3" on conduit.
- 4. Layout of bends is now complete. Next, place "Mark 2" in line with front edge of shoe hook and make first bend.
- Rotate conduit 180°. Place "Mark 3" in line with front edge of shoe hook and complete second bend. NOTE: Figures are approximate.

To locate the center to center distance of offset bending marks other than those listed in Chart D, use the following multipliers. Multiply the height of offset desired by 3.86 on 15 degree bends, 2 on 30 degree bends, and 1.4 on 45 degree bends.

NOTE: Figures are approximate.

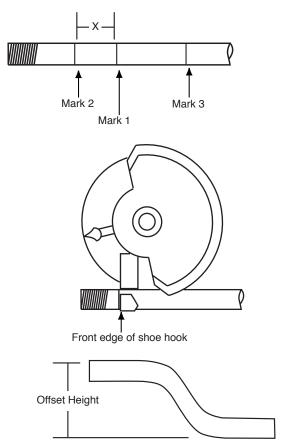


Figure 25. Offset Bending Markings

Chart E									
Size	1/2"	3/4"	1"	11/4"	11/2"	2"			
"X"	31/16"	31/16"	31/16"	4"	41/4"	41/2"			

	Chart D - Offset Height											
		2	4	6	8	10	12	14	16	18	20	22
15°	Max. Conduit Size Center-to-center	³ / ₄ " 7 ³ / ₄ "	1½" 15 ⁷ /16"	2" 23 ³ /16"	≤ 2" 30 ¹⁵ / ₁₆ "	≤ 2" 38 ⁵ /8"	≤ 2" 46 ³ /8"	≤ 2" 54 ¹ / ₁₆ "	≤ 2" 61 ¹³ / ₁₆ "	≤ 2" 69 ⁹ / ₁₆ "	≤ 2" 77 ¹ /4"	≤ 2" 85"
30°	Max. Conduit Size Center-to-center	-	³ / ₄ " 8"	1" 12"	1½" 16"	2" 20"	≤ 2" 24"	≤ 2" 28"	≤ 2" 32"	≤ 2" 36"	≤ 2" 40"	≤ 2" 44"
45°	Max. Conduit Size Center-to-center	-	-	1/2" 81/2"	1" 11 ⁵ ⁄ ₁₆ "	1 ¹ / ₄ " 14 ¹ / ₈ "	1½" 16 ¹⁵ /16"	2" 19 ¹³ / ₁₆ "	≤ 2" 22 ⁵ /8"	≤ 2" 25 ⁷ / ₁₆ "	≤ 2" 28 ¹ / ₄ "	≤ 2" 31½8"

REPAIR AND SERVICE INSTRUCTIONS: For repair service and parts contact your nearest Gardner Bender Service Center. The Gardner Bender Service Center will provide complete and prompt service on all Gardner Bender products.

PARTS AND SERVICE: For quality workmanship and genuine Gardner Bender parts, select an Authorized GB Service Center for your repair needs. Only repairs performed by an Authorized Service Center displaying the official GB Authorized sign are backed with full factory warranty. Contact Gardner Bender (414)352-4160 for the name of the nearest GB Authorized Service Center.

WARRANTY: Gardner Bender warrants its product against defects in workmanship and materials for 1 year from date of delivery to user. Chain is not warranted. Warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products or use of improper fluid.

WARRANTY RETURN PROCEDURE: When question of warranty claim arises, send the unit to the nearest GB Authorized Service Center for inspection, transportation prepaid. Furnish evidence of purchase date. If the claim comes under the terms of our warranty the Authorized Service Center will REPAIR OR REPLACE PARTS AFFECTED and return the unit prepaid.

